

**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**  
**OFFICE OF CONSERVATION AND COASTAL LANDS**  
**Honolulu, Hawai'i**

**Board of Land and Natural Resources**  
**Department of Land and Natural Resources**  
**State of Hawai'i**  
**Honolulu, Hawai'i**

FILE NO.: CDUA OA-3372  
REF: OCCL: MC  
Acceptance Date: August 9, 2006  
180 Exp. Date: February 5, 2007

January 12, 2007

**REGARDING:** Sewer Line Replacement

**APPLICANT:** City and County of Honolulu Department of Design and Construction, 650 South King Street, Honolulu HI 96813

**AGENT:** Kimura International, 1600 Kapi'olani Boulevard, Suite 1610, Honolulu, HI 96814

**LANDOWNER:** Department of Environmental Services, City and County of Honolulu, 1000 Ulu'ōhi'a Street, Room 308, Kapolei, HI 96707

**LOCATION:** Ka'elepulu Stream, Kailua, Ko'olaupoko, O'ahu

**TMK:** (1) 4-9-49:87

**AREA OF USE:** 350 square feet

**SUBZONE:** General

**DESCRIPTION OF AREA AND CURRENT USE:**

The project site is on the windward side of O'ahu in a mixed commercial and residential neighborhood surrounding Ka'elepulu Pond (Enchanted Lake). The project area crosses Ka'elepulu Stream, which is in the Resource Subzone of the Conservation District; the remainder of the project area is zoned Urban. **Exhibit 1** shows the entire project area.

The 3450-acre Ka'elepulu watershed begins on the slopes of Mount 'Olomana. The main stream flows in a ½ mile hard channel before draining into the 80-acre Ka'elepulu Pond. The privately owned pond is fringed by wetlands. Downstream, Ka'elepulu Stream flows for one mile north before emptying into the ocean at Kailua Beach Park. The Hāmākua Canal, which drains the Hāmākua Marsh, empties into the stream approximately one half

mile from the opening. A sand bar at its mouth blocks the stream from flowing freely into the Bay, which the City and County of Honolulu clears approximately once per month.

The project crosses Ka'elepulu Stream immediately south of Keolu Drive, close to the Pond, at TMK (1) 4-2-49:87. **Exhibit 2** shows this TMK. This is in a residential neighborhood.

The stream itself is listed in Hawai'i's 303(d) list of impaired waters due to turbidity, high nutrient and bacteria levels, and chlorophyll pollution. Bacteriological sampling by the University of Hawai'i in 1993 showed levels of *Clostridium perfringens*, and *Escherichia coli* that exceeded recreational water standards. This and other studies determined that these fecal bacteria were most likely products of wild ducks and soil contamination, respectively.

The US Fish and Wildlife Service identified four federally listed waterfowl that may occur in the project area – Koala maoli (the Hawaiian duck, *Anas wyvilliana*), 'Alae ke'oke'o (the Hawaiian coot, *Fulica alai*), 'Alae 'ula (the Hawaiian moorhen, *Gallinula chloropus sandvicensis*), and Ae'o (the Hawaiian stilt, *Himantopus mexicanus knudseni*).

The shore is lined with the invasive red mangrove (*Rhizophora mangle*). No native or endemic flora is known to occur in the project area.

The Hawai'i Stream Assessment (1990) showed that Ka'elepulu was not able to support native aquatic fauna, that it had substantial riparian resources, that it was once associated with taro cultivation, and that – despite the high bacteria levels - recreational activities included fishing, swimming, and boating. The stream depth is greater than 2 feet at mid-channel, allowing for small boat navigation.

Ka'elepulu pond was designated State Site 50-80-11-377 due to its strong cultural associations. It was used as a fish pond in historic times, and was known for its mullet, awa, āhole, 'o'opu, and limu kala-wai. It has also been associated with a guardian mo'o, the story of the runner 'Ulanui, and the goddess Hi'iaka and her companion Wahine-omao. There are no known sacred sites, burial grounds, or archaeological sites within the project area.

## **PROPOSED USE:**

The City and County of Honolulu, Department of Design and Construction is proposing to replace an existing trunk sewer line in Kailua. The total length of the new line is 1.25 miles, or 6600 linear feet. Part of the sewer will cross under Ka'elepulu Stream; this is the only part of the project that lies within the State Land Use Conservation District.

For the crossing the sewer will be installed as an inverted siphon using horizontal drilling methods (HDD). The siphon will consist of a bundle of three high-density polyethylene pipes measuring 8, 10, and 12 inches in diameter.

The HDD drill path will be approximately 560 feet long, of which 115 feet will pass under the stream and therefore in the Conservation District. The proposed drill path is located between 20 and 40 feet below the stream bottom. The Final Environmental Impact statement does not foresee any drill or discharge from the operation entering the stream, although it does specify procedures should leakage occur due to unforeseen situations.

The installation of the Ka'elepulu Stream section is anticipated to take three to four months. HDD methods for construction begins with the drilling of a pilot hole, which will then be enlarged by various reaming tools to the appropriate size. Drilling mud will be used to flush the cuttings from the hole in order to stabilize it so that it doesn't cave in.

After the hole is completed, the pipeline will be pulled back through the hole in a single operation.

#### **SUMMARY OF COMMENTS:**

The application was referred to the following agencies for their review and comment: the State Department of Land and Natural Resources (DLNR) - O'ahu Board Member, O'ahu District Land Office, Division of Forestry and Wildlife, Division of Conservation and Resource Enforcement, State Historic Preservation Division; the Office of Hawaiian Affairs; the Department of Health; and the Kailua Neighborhood Board.

Copies of the application were made available at the Hawai'i State Library, and notice of the project was published in the August 23, 2006 issue of *The Environmental Notice* published by the Office of Environmental Quality Control.

Comments were received from the following agencies and are summarized as follows:

##### DLNR Land Division

No comments.

##### DLNR Division of Forestry and Wildlife

No comments.

##### DLNR Division of Conservation and Resource Enforcement

No comments.

##### Kailua Neighborhood Board

The Board understands the need for the project, but feels that it's concerns were not adequately addressed in the FEA. In particular, the Board asks:

- What precautions will be taken to prevent harm to the endangered Hawaiian duck and other waterfowl?

- A 2001 Fish and Wildlife survey showed that federally listed species that might occur in the area include the Hawaiian duck, Hawaiian coot, Hawaiian moorhen, and Hawaiian owl. The Board also notes that there are historical reports of the Hawaiian owl in the neighborhood. The Board asks if a survey was done, and what the results were – or, if a survey was not done, the reason why.

Applicant's response

- *The project does not involve any work to be done in State waters. The applicant used a certified biologist, Tim Ohashi, to study the potential impacts. He found that wildfowl habitat was marginal in the project area, and that existing waterfowl had adapted to urbanization. The applicant also states that using a construction method that goes below the stream mitigates the effects the project might have on local flora and fauna.*

- *A field survey was conducted by Mr. Ohashi on July 13, 1006. The results are shown in §3.2.2 of the FEA, pages 3:16-18. He observed fifteen species of birds, including the duck and stilt.*

Office of Hawaiian Affairs

The Office had recommended that the applicant submit an Archaeological Monitoring Plan to the State Historic Preservation Division for review, and notes that the FEA does not contain any information regarding such a plan.

Applicant's response

*The Archaeological Monitoring Plan had not yet been finished when the applicant turned in this CDUA in March 2006. Since then it has been finished and submitted to the Historic Preservation Division for review. The Division approved the monitoring plan on November 3, 2006.*

**ANALYSIS:**

After reviewing the application, the Department found that:

1. The proposed use was an identified use within the Conservation District according to the Hawai'i Administrative Rules (HAR), § 13-5-22, P-6, PUBLIC PURPOSE USE, (D-1), *land uses undertaken by the State of Hawai'i or the counties to fulfill a mandated government function, activity, or service for public benefit and in accordance with public policy and the purpose of the conservation district. Such land uses many include transportation services, water systems, communications systems and recreation facilities.* This use required a permit from the Board of Land and Natural Resources (BLNR).
2. Pursuant to HAR §13-5-40(4), HEARINGS, a public hearing was not required.
3. Pursuant to HAR §13-5-31 *Permit applications*, the permit required that an environmental assessment be carried out. The Office of Conservation and Coastal

Lands (OCCL) accepted that the *Final Environmental Assessment for the Wana'ao Road / Keolu Drive Reconstructed Sewer* of March 2006, and the *Finding of No Significant Impact [FONSI]* of April 8, 2006 satisfied this requirement.

### SECTION 13-5-30 CRITERIA:

The following discussion evaluates the merits of the proposed land use by applying the criteria established in Section 13-5-30, Hawaii Administrative Rules (HAR).

1. *The proposed land use is consistent with the purpose of the Conservation District.*

The purpose of the Conservation district is to regulate land uses for the purpose of conserving, protecting, and preserving the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare.

This project is designed to promote and protect the public health.

2. *The proposed land use is consistent with the objectives of the subzone of the land on which the use will occur.*

The objective of the Resource subzone is to develop, with proper management, areas to ensure sustained use of the natural resources of the area.

The Ka'elepulu area has been heavily urbanized. The sewer will run under the Stream, and should have a minimal impact on the natural resources of the area.

3. *The proposed land use complies with provisions and guidelines contained in Chapter 205, HRS, entitled "Coastal Zone Management," where applicable.*

Not applicable

4. *The proposed land use will not cause substantial adverse impacts to existing natural resources within the surrounding area, community, or region.*

The applicant proposes to use best management practices in the installation and management of the pipe line. It provides a needed public purpose, and the applicant has chosen the alternative with the least impact on the natural resources of the area.

5. *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding area, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

A sewer line is a standard facility in urban areas.

6. *The existing physical and environmental aspect of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, which ever is applicable.*

The sewer line will run underground and will not affect open space or natural beauty. There will be some noise and visual pollution during construction, but no other aesthetic impacts are foreseen during routine operations of the pipeline.

7. *Subdivision of the land will not be utilized to increase the intensity of land uses in the Conservation District.*

No subdivision of land is proposed.

8. *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

It is staff's opinion that the proposed project will not be detrimental to the public health, safety and welfare.

#### **DISCUSSION:**

The project is part of a much larger project involving upgrading the sewer system in Kailua. The County hopes to reduce the frequency and severity of sewage spills and dumps by replacing pipes that have deteriorated, correcting the alignment for proper gravity flow, and increasing flow capacity.

The only part of this project that lies in the Conservation District is where the sewer line crossed under Ka'elepulu Stream. Construction of the new pipeline will be done through horizontal directional drilling, which will minimize ground impacts. There will be no disruption of the stream bed during construction or operation.

Staff foresees some disruption to recreational activities during construction of the pipeline; however, these will be temporary in nature and should not continue once construction is finished.

**RECOMMENDATION:**

Based on the preceding analysis, staff therefore recommends that the Board of Land and Natural Resources APPROVE this application for sewer line replacement through horizontal directional drilling beneath Ka'elepulu Stream, located at TMK (1) 4-9-49:87, Kailua, Ko'olaupoko District, on the island of O'ahu, subject to the following conditions:

- 1) The applicant shall comply with all applicable statutes ordinances, rules, and regulations of the Federal, State and County governments, and the applicable parts of Section 13-5-42, Hawai'i Administrative Rules;
- 2) The applicant, their successors and assigns, shall indemnify and hold the State of Hawai'i harmless from and against any loss, liability, claim or demand for property damage, personal injury or death arising out of any act or omission of the applicant, their successors, assigns, officers, employees, contractors and agents under this permit or relating to or connected with the granting of this permit;
- 3) The applicant shall comply with all applicable Department of Health administrative rules;
- 4) All mitigation measures set forth in the application materials, and in the final environmental assessment for this project are hereby incorporated as conditions of the permit;
- 5) Any work done on the land shall be initiated within one year of the approval of such use, and unless otherwise authorized be completed within three years of the approval. The applicant shall notify the Department in writing when construction activity is initiated and when it is completed;
- 6) Before proceeding with any work authorized by the Board, the applicant shall submit four (4) copies of the construction and grading plans and specifications to the Chairperson or his authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit application. Three (3) of the copies will be returned to the applicant. Plan approval by the Chairperson does not constitute approval required from other agencies;
- 7) In issuing this permit, the Department has relied on the information and data that the applicant has provided in connection with this permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Department may, in addition, institute appropriate legal proceedings;
- 8) Should historic remains such as artifacts, burials or concentration of charcoal be encountered during construction activities, work shall cease immediately in the

vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact SHPD (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary;

- 9) The applicant acknowledges that the approved work shall not hamper, impede or otherwise limit the exercise of traditional, customary or religious practices in the immediate area, to the extent such practices are provided for by the Constitution of the State of Hawai'i, and by Hawai'i statutory and case law;
- 10) During construction, appropriate mitigation measures shall be implemented to minimize impacts to the marine environment, off-site roadways, utilities, and public facilities;
- 11) Where any interference, nuisance, or harm may be caused, or hazard established by the use, the applicant shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
- 12) The applicant understands and agrees that this permit does not convey any vested rights or exclusive privilege;
- 13) The applicant shall obtain a land disposition from the O'ahu District Land Office for the use of State land;
- 14) The applicant shall provide documentation (e.g., book and page, or document number) that the permit approval has been placed in recordable form as a part of a deed instrument;
- 15) Other terms and conditions as may be prescribed by the Chairperson; and
- 16) Failure to comply with any of these conditions shall render this Conservation District Use Permit null and void.

Respectfully submitted,



Michael Cain  
Staff Planner

**Approved for submittal**



**Peter T. Young, Chairperson**  
Board of Land and Natural Resources





